UNITED STATES PATENT AND TRADEMARK OFFICE

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10/574,785	03/08/2007	Takashi Nakagawa	403683/MELCO	2529

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EXAMINER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 March 2007</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-8</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-8</u> is/are rejected.

7) ☒ Claim(s) <u>1,3,5 and 6</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>06 April 2006</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>See Continuation Sheet</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :04/06/2006, 10/19/2007, 09/01/2010.

DETAILED ACTION

Status of Claims

1.   This action is in reply to the communication filed on 03/08/2007.

2.   Claims 1-8 have been amended in a preliminary amendment dated 04/06/06.

3.   Claims 1-8 are currently pending and have been examined.

Drawings

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 116, 117, 124, 126, 127, 129, 510, 511, 1204, STEP 25, and STEP 26. Regarding STEP 26, the paragraph beginning at page 30, line 11 of Applicant's written description describes Fig. 12, in which STEP 26 appears in the drawings, as containing STEP 23, this appears to be in error.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- Page 13, lines 14 and 15 of Applicant's written description describes the "organized design data" of Fig. 4(c) (reference 120) as reference 1200. Reference 1200 is recited in Fig. 11(c) described as a "layered segment of organized design data" and does not appear to be present in Fig. 4.

- The paragraph beginning at page 28, line 12 of Applicant's written description describes the "unorganized design data" of Fig. 11 once as reference 110, as shown in the figure, and four times as 1100, which does not appear in the figure. Similarly, the paragraph beginning at page 29, line 15 of Applicant's written description describes the "unorganized design data" of Fig. 11 twice as 1100, and once describes reference 1100 a "scene sequence".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character 128 has been used to designate both "unified organized design data" in Fig. 8 and an element of Fig. 7. Reference 128 regarding Fig. 7 is not described in the specification, however, as Fig. 7 is describes "return event identification rules" not "scene unification rules" as claim 8, this does not appear to be the same element.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office

action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7.   The disclosure is objected to because of the following informalities: In the BRIEF DESCRIPTION OF THE DRAWINGS on page 6 lines 12-21 of Applicant's written description describe Fig. 7(c) and 8(c) as illustrating "organized design data" when the respective portion of the drawings relates to "Model generation design data". The "organized design data" is shown in portions 7(d) and 8(d) of the drawings, descriptions of which are absent in this portion of the disclosure. Also in the BRIEF DESCRIPTION OF THE DRAWINGS, on page 7 lines 13-14 of Applicant's written description describe Fig. 14 as illustrating Embodiment 5 of the invention whereas the paragraph beginning at page 33, line 18 of Applicant's written description describes Fig. 14 as illustrating Embodiment 4.

Appropriate correction is required.

Examiner's Note: While it is the Examiner's hope that all errors in the drawings have been identified above, due to the large number of issues Applicant may benefit from a complete review of the drawings and their respective descriptions in the disclosure in order to ensure all problems have been resolved.

Claim Objections

8.   Claims 1, 3, 5, and 6 objected to because of the following informalities: Claims 1, 3, 5, and 6 are

directed toward a system; however the functionality of the system's components is described as

to what the components are *for* and could be considered as intended use. In order to give the

limitations patentable weight, the claims should be amended to recite what the system's

components are **configured** or **operable** to do. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

10.   Claims 1-8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

Claims 1-8:

The claims are generally narrative and indefinite, failing to conform with current U.S.

practice. They appear to be a literal translation into English from a foreign document and

are replete with grammatical and idiomatic errors. Particularly, due to the manner in

which several limitations are structured, the relationship between the many phrases,

dependent clauses, and independent clauses cannot be established. Also, many

limitations reuse the same claim terms, causing it to be unclear as to which claim element

is being referred. Examples:

- Claim 1 recites the limitation:

a rule processor for converting the unorganized design data into organized design

data by reading out the unorganized design data stored in the unorganized design

data storage and reading out the organizing rule group stored in the rule storage, and

applying, in sequence, to the read-out unorganized design data each organizing rule included in the read-out organizing rule group, to analyze the unorganized design data;

Due to the manner in which this limitation is constructed, it cannot be determined which of either the *reading out the organizing rule group stored in the rule storage* or the *applying, in sequence, to the read-out unorganized design data each organizing rule included in the read-out organizing rule group* is being performed *to analyze the unorganized design data.*

- Claim 2 recites the limitation:

according to instruction by the rule processor, the organized design data is deemed to be unorganized design data, and the unorganized design data is converted into organized design data by applying in sequence, again, to the unorganized design data the organizing rules included in the organizing rule group, and by analyzing the unorganized design data.

It is unclear if *the unorganized design data* refers to *the unorganized design data* recited in claim 1 or if it refers to *the organized design data* which is *deemed to be unorganized design data* as recited in claim 2. In either case, it is generally confusing why applying the same *organizing rules…again* would produce a different result than when the *organizing rules* were applied the first time as recited in claim 1.

These are only two examples and Applicant should perform a complete review of the claim language in order to ensure the limitations provide a clear, unambiguous, description of Applicant's invention.

Claim Rejections - 35 USC § 101

11.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12.   Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-8 are directed to a *system*; However, the recited components of the system appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules or software per se. The claims are directed to functional descriptive material per se and hence non-statutory.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1, 2, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al. (US 7,149,734 B2).

Claim 1:

Carlson discloses the limitations as shown in the following rejections:

- *an unorganized design data storage* (i.e. repository) *for storing…unorganized design data* (i.e. artifacts) (see at least the Abstract).

- *a rule storage for storing an organizing rule group* (i.e. asset schemas), *the organizing rule group being a collection of organizing rules describing rules* (i.e. data description language) *for converting the unorganized design data* (i.e. artifacts) *into reusable form* (i.e. software asset) (see at least column 1 lines 39-67).

- *a rule processor* (i.e. asset source) *for converting the unorganized design data* (i.e. artifacts) *into organized design data* (i.e. software asset) *by reading out the unorganized design data stored in the unorganized design data storage* (i.e. repository) *and reading out the organizing rule group* (i.e. asset schema) *stored in the rule storage, and applying, in sequence, to the read-out unorganized design data each organizing rule* (i.e. data definition language) *included in the read-out organizing rule group, to analyze the unorganized design data* (see at least column 19 lines 1-31 and Fig. 4). See additionally column 20 line 50 through column 21 line 8 and Fig. 6.

- *an organized design data storage* (i.e. asset library) *for storing the organized design data* (i.e. software assets) *according to instruction by the rule processor* (see at least column 2 lines 35-52).

Carlson describes a system for extracting artifacts (i.e. *unorganized design data*) from a repository in order to generate reusable software assets (i.e. *organized design data*) to be used in a development environment in at least column 2 lines 35-52. Carlson does not explicitly disclose the artifacts are *user-interface-software design data including events*

directed to a software product and information on software-product scene changes corresponding to the events. However, in at least column 5 line 37 through column 6 line 18, Carlson discloses artifacts comprise any item related to a software development environment including at least source code, binary code, software components, code elements, and modeling information. It would have been obvious to one of ordinary skill in the art at the time of the invention that *interface-software design data including events directed to a software product and information on software-product scene changes corresponding to the events* are but one example of the artifacts disclosed by Carlson.

Claim 2:

Carlson discloses the limitations as shown in the rejections above. Furthermore, Carlson discloses *according to instruction by the rule processor, the organized design data is deemed to be unorganized design data, and the unorganized design data is converted into organized design data by applying in sequence, again, to the unorganized design data the organizing rules included in the organizing rule group, and by analyzing the unorganized design data* (see at least column 1 line 58 through column 2 line 10).

Claim 5:

Carlson discloses the limitations as shown in the rejections above. Furthermore, Carlson discloses the limitations as shown in the following rejections:

- *specific design data within the unorganized design data has a designation field* (i.e. definition/constraint templates) *for designating either preferential application of an organizing rule designated in advance, or non-application of the organizing rules,* (i.e. subclasses and requirements) (see at least column 8 lines 15-48).
- *the user interface software design system further comprises a design data editor for enabling the designating into the designation field* (see at least column 11 lines 14-27 and column 12 lines 14-20).

Claim 6:

Carlson discloses the limitations as shown in the rejections above. Furthermore, Carlson discloses *a rule editor for editing the organizing rules according to input information* (see at least column 11 lines 14-27 and column 12 lines 14-20).

Claim 7:

Carlson discloses the limitations as shown in the rejections above. Furthermore Carlson discloses "Repositories...represent any data source within an enterprise that stores information (herein artifacts) relevant to the management of reusable assets" in at least column 5 lines 53-55; and also discloses "Asset library 36 may be implemented as any data source, such as a relational database management system (RDBMS), an object-oriented database, flat files, and the like." See also column 12 lines 34-45.

Carlson does not explicitly disclose *the unorganized design data storage* (i.e. repository) *and the organized design data storage* (i.e. asset library) *are shared in a design data storage*.

However, as both the repository and the asset library disclosed by Carlson may be implemented as "any data source" it would have been obvious to one of ordinary skill in the art that they be implemented as the same data source in order to facilitate storage management.

Furthermore, Carlson does not specifically disclose *the unorganized design data* (i.e. artifacts) *and the organized design data* (i.e. software assets) *are stored in different areas within the design data storage*. However, Examiner takes Official Notice that storing data types and/or versions of data within the same storage is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to store both the artifacts and software assets to allow for a flexible, collaborative development environment.

Claim 8:

Carlson discloses the limitations as shown in the rejections above. Furthermore Carlson discloses "Repositories...represent any data source within an enterprise that stores information (herein artifacts) relevant to the management of reusable assets" in at least column 5 lines 53-55; and also discloses "Asset library 36 may be implemented as any data source, such as a relational database management system (RDBMS), an object-oriented database, flat files, and the like." See also column 12 lines 34-45.

Carlson does not explicitly disclose *the unorganized design data storage* (i.e. repository) *and the organized design data storage* (i.e. asset library) *are shared in a design data storage*.

However, as both the repository and the asset library disclosed by Carlson may be implemented as "any data source" it would have been obvious to one of ordinary skill in the art that they be implemented as the same data source in order to facilitate storage management.

Furthermore, Carlson does not specifically disclose *the organized design data* (i.e. software asset) *is stored in the design data storage by rewriting the unorganized design data* (i.e. artifact) *stored in the design data storage with the organized design data*. However, Examiner takes Official Notice that over-writing old versions of data with new or updated data within the same storage is old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to over-write the original artifacts with the captured software assets in order to efficiently exploit the available storage space.

16.   Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al.

(US 7,149,734 B2) in view of Zondervan et al. (US 2003/0115572 A1)

Claim 3:

Carlson discloses the limitations as shown in the rejections above. Furthermore, Carlson

discloses detecting new or updated artifacts (i.e. *new unorganized design data*) in a

repository and converting them into software assets (i.e. *organized design data*) in at

least column 19 lines 1-31 and Fig. 4.

Carlson does not describe how the new artifacts come to be stored in the repository and

does disclose the remaining limitations of claim 3. Zondervan, however, discloses a

system for facilitating reuse in the development of new applications, analogous to the

software asset management system discloses by Carlson, in at least paragraph 0019.

Zondervan further discloses the limitations as shown in the following rejections:

- *an input information generator for generating an event directed to a software
  product as a basis for differential development* (see at least paragraphs 0017 and
  0018).

- *inputting the event into the software product* (see at least paragraph 0151).

- *a model generator for receiving the event input into the software product and the
  information on the software-product scene change* (i.e. UI state transitions) *for
  the event input, and generating data, as additional design data* (i.e. patterns)*, for
  the user interface software, including the event and the scene change
  information* (see at least paragraph 0155 and 0164). See additionally paragraphs
  0167-0170 wherein Zondervan discloses storing and reusing UI state patterns in
  the development of new applications.

It would have been obvious to one of ordinary skill in the art to combine Carlson's asset

management system with Zondervan's application development system because it allows

"...for reusing exiting functionality rather than having to create custom applications for

each desired function." Which allows "…companies to leverage existing infrastructure, thereby saving money (Zondervan paragraph 0015)."

Claim 4:

The combination of Carlson/Zondervan discloses the limitations as shown in the rejections above. Furthermore, Carlson discloses *when the rule processor analyzes the unorganized design data according to the organizing rules and determines that additional design data is necessary, the rule processor sends to the input information generator an instruction for generating required additional design data* in at least column 19 lines 32-52 and column 20 line 50 through column 21 line 31, wherein Carlson describes determining a captured asset requires additional asset information and augmenting the asset with the additional asset information according capture logic and mapping rules. Carlson does not detail how the additional information is obtained, only that is obtained from a user or from the invocation of automated scripts or components, and does not specifically disclose *the input information generator generates the event directed to the software product, and inputs the event into the software product.*

Zondervan, however, discloses sending interactions (i.e. *events*) to a software application to generate a pattern (i.e. *design data*) to provide additional functionality to an existing pattern in at least paragraphs 0166-0171. See also paragraphs 0022-0024.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Carlson et al. (US 7,322,024) related to US 7,149,734 B2 used in the above rejections.

- Goiffon et al. (US 6,427,230 B1) describes a system for organizing software components to facilitate development reuse.

- Bowman-Amuah (US 6,256,773 B1) discloses a comprehensive software development system including extracting functionality from legacy software for reuse.

- Gilboa (US 2004/0148586 A1) discloses a UI development tool creating, and storing for reuse, UI scenes and transitions.

- Levin (US 7,711,736 B2) discloses a system for organizing a database of unstructured data according to user defined rules.

- IBM (General Scheme to Capture Window Objects for Reuse) briefly describes GUI scene information to reuse in GUI development.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Paul Mills** whose telephone number is **571-270-5482**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **Emerson Puente** can be reached at **571-272-3652**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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/PAUL MILLS/

Examiner, Art Unit 2193

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